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EXECUTIVE SUMMARY OF THE NATIONAL COMMUNICATION OF

CZECH REPUBLIC

submitted under Articles 4 and 12 of the
United Nations Framework Convention on Climate Change

In accordance with decision 9/2 of the Intergovernmental Negotiating Committee of the Framework Convention on Climate Change (INC/FCCC), the interim secretariat is to make available, in the official languages of the United Nations, the executive summaries of the national communications submitted by Annex I Parties.

Note: Executive summaries of national communications issued prior to the first session of the Conference of the Parties bear the symbol A/AC.237/NC/___.

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Copies of the national communication of the
Czech Republic may be obtained from the following address:

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INTRODUCTION

1. The Czech Republic acceded to the United Nations Framework Convention on Climate Change on October 7, 1993 on the basis of decree No. 323 of the Czech Government of 16 June 1993, as the thirty-sixth Party to the Convention. Aware of its responsibility, ensuing from this deed, and with respect to its national conditions and priority objectives, the Czech Republic presents its First Communication by means of the following report on its meeting the commitments resulting from joining the Convention, according to Articles 4
and 12 thereof, and from being included among the developed countries of Annex I of the Convention.

2. The Communication informs the other Parties to the Convention on the current situation and on policies and measures to be gradually introduced in the Czech Republic, to the Article 4.2(b) of the Convention, with the aim to stabilize its anthropogenic emissions of greenhouse gases, in particular of carbon dioxide ($C0_2$) methane (CH_4), and nitrous oxide (N_20), which are not covered by the Montreal Protocol on Ozone-Depleting Substances, and to protect and further enhance its sinks of carbon dioxide, according to Article 4.1(d).

3. The Czech Republic was established on January 1,1993 as a result of the splitting of Czechoslovakia. Deep changes in its economic sphere and in the State administration, legislation, statistical and taxation systems have created the conditions, under which it was very difficult to provide a qualified estimation of the development of GHG emissions with a sufficient measure of reliability, according to Articles 4.2(b) and 12.2(b) of the Convention.

4. Since 1990, which the Czech Republic has on the basis of current knowledge, and therefore preliminarily, accepted as the reference year for purposes of the Convention, industrial production has decreased the structure of energy consumption changed, and subsequently carbon dioxide emissions, which represented the main component of the national balance of greenhouse gases, have fallen.

5. As to the date of this Communication, a greenhouse gas inventory for the year 1990 was elaborated, according to the recommended IPCC/OECD methodology. The inventory will be gradually extended to the previous and following years, and thus simultaneously verified in this way.

ECONOMIC TRANSFORMATION IN 1990s

6. The Czech Republic belongs to the countries undergoing the process of transition to a market economy. The transformation, which started in 1990, caused the reduction of production in its first phase so that after the initial drop in gross domestic product (GDP) by about 15 per cent in 1991, another drop followed in 1992 by about 7 per cent (Table 1). In

the initial stage of the transformation, mostly uneconomic production and exports were reduced.

7. Over 90 per cent of energy in the Czech Republic has been obtained by combustion of fossil fuels, their composition being the reason that the specific emissions of harmful pollution (per capita, per 1 sq. km, etc.) are relatively high. The main source of energy is brown coal. The decrease of final energy consumption has not reached the level corresponding to the drop in economy productivity. Hence, the energy demand to produce the GDP increased somewhat in the early 1990s (Table 1).

8. Forests are the main absorbers of $C0_2$ in the Czech Republic, occupying 33.5 per cent of its area. An unfavourable species composition of forests and heavy impacts of $S0_2$ and NO_x, emissions adversely affect the stability of forest ecosystems. Over 60 per cent of the total forest area exhibit some sign of damage.

Table 1. Preliminary estimates of carbon dioxide emissions per capita, and selected indicators

Indicator	1990	1991	1992	1993[b]
CO_2 emissions (tons per capita)	16.4	15.3	14.0	13.8
GDP (per cent, interannual)	-1.6	-14.7	-7.1	-0.3
Index of industrial production	100	78	68	63
Coal production (1988=100%)[a]	85/86	82/72	74/69	73/67
Total energy consumption (interannual increase %)		-3.5	-7.3	-7.7
Energy demand to produce the GDP (PJ/K6 1 000 million)	4.12	4.48	4.47	
Number of vehicles/100 inhab.	26.2	26.9	27.9	29

Notes: [a] Coal production (brown/black coal)
[b] Data for 1993 not available.

EMISSION INVENTORY

9. The emission inventory of the Czech Republic for the year 1990 was elaborated according to the recommendation of the United Nations Environment Programme (UNEP) using the IPCC/OECD methodology. An inventory of $C0_2$ emissions arising from combustion processes was performed using REZZO 1990 data (REZZO Register of Emissions and Air Pollution Sources - is the official information system of the Czech Republic) and with selected data of CORINAIR 1990 emission inventory. A simplified overview of the GHG sources and sinks is shown in Table 2.

Table 2. GHG Sources and Sinks

Source/Sink	Emissions GHG [Mt]		
	CO_2	CH_4	N_2O
Energy production	162.5	0.47	0.02
Industrial processes	6.8	>0.01	>0.01
Agriculture	>0.05	0.17	>0.01
Forestry	-2.3	0.09	0.02
Wastes	0.2	1.15	>0.01
T o t a l	**167.25**	**0.88**	**0.07**

In 1990, the $C0_2$ emissions represented 89 per cent, the methane emissions (GWP = 11) 5 per cent, and nitrous oxide emissions (GWP = 270) 6 per cent of the total GHG emissions, expressed as $C0_2$ equivalent.

TRENDS OF EMISSIONS BY 2000

10. The basic scenario for the period of 1994-2005 has been set up, which represents a limit hypothetical case, characterized by an assumed annual growth of the GDP by 3.5 to 5.5 per cent, a large energy demand to produce the GDP, a slow speed of energy savings, the export of products with low value added, and the import of machinery and equipment. Therefore, it concerns the least favourable trend from the point of view of carbon dioxide emissions. Nevertheless, it appears that even in this case the carbon dioxide emissions in 2000 would not exceed their amounts in 1990. Similar conclusions may be made on trends of emissions of methane and nitrogen monoxide.

11. The CO_2 emissions before 1990, and in 1991-1993 period, have been estimated from the main items of the GHG balance. The data will be detailed when the full inventory is completed, according to UNEP (IPCC) methodology, for this period.

12. So far incomplete knowledge of the amounts of GHG emissions, concerning in particular early 1990s (the beginning of the economic transformation), causes a heavy uncertainty accompanying the structure of any time projection of amounts of GHG emissions.

POLICIES AND MEASURES

13. The final chapter of the National Communication describes measures which the Czech Republic prepares for adoption, or has adopted after 1990 (which is preliminarily taken as reference year). The main objective of some of these measures is the prevention of further environment pollution in a wider sense. However, they will also bring along a reduction of GHG emissions.

Adopted measures

14. Carbon dioxide was the main item of the national inventory carried out for 1990, and therefore, the measures described in the First Communication of the Czech Republic concentrated especially at this gas.

Carbon dioxide sources

15. The adopted measures include the legislation instruments, in particular:

- The Air Protection Act
  (Act No. 309/1991 S.B., on the protection of the air against pollutants, and Act No. 218/1992 S.B., which changes and supplements Act No. 309/1991 S.B., on the protection of the air against pollutants

- Act of the Czech National Council No. 389/1991 S.B., on the State administration of air protection and charges for the pollution of air)

- Act of the Czech National Council No. 58811992 S.B., on value-added tax

- Act of the Czech National Council No. 586/1992 S.B., on income tax.

16. Further, programmes have already been started which will also lead to CO_2 emission reduction in their consequences:

- National Programme for Air Recovery,
- Programme of Heat Savings in Residential Buildings,
- Programme of Energy Saving Lighting

Carbon dioxide sinks

17. Activities of the Czech Republic in this field are represented by the following programmes:

- Maintenance of Forests;
- Support for using Biomass;
- Bio-Fuel Oil.

All adopted measures are connected with the transformation of the national economy. When evaluating them, it is necessary to realize their total impact and how much does this transformation count for the Czech Republic.

IMPACTS OF ADOPTED MEASURES ON EMISSIONS OF GREENHOUSE GASES

18. The degree of influence given in Table 3 has been estimated according to both known and justifiably assumed effects.

Table 3. Estimated impact of measures on CO_2 emissions

Anticipated reduction by 2000 in sectors [Mt]	
Generation of energy and heat	5
Housing	2
Industry	1
Agriculture and forestry	0.5
T o t a l	**8.5**

With respect to the fact that CO_2 emissions should amount to 143.5 Mt, according to the basic (the least favourable) scenario, the adopted measures would significantly assist in stabilization of the GHG emissions.

RESEARCH AND SYSTEMATIC OBSERVATIONS

19. In accordance with Article 5 of the Convention, the Czech Republic participates in the national and international scientific activities, which are related to the issue of global climate change.

20. The National Climate Programme (NKP) was established in the Czech Republic in 1991, and its members have contributed to this First National Communication. At present, the NKP is preparing a country study, the results of which will be used in the National Communications to follow. Within the framework of the NKP, **a vulnerability** study for the Czech Republic will be prepared, together with **regional climatic scenarios,** involving the possible effects of climate change on the national economy, environment and human health.

INFORMATION AND EDUCATION OF THE PUBLIC

21. In accordance with Article 6 of the Convention, the activities in the fields of the public education and promoting civic responsibility will be supported. This sphere includes, above all, the continuous process of informing the public on the nature and causes of global climate change and on the method of its prevention. Both the **Project of Environmental Education** (PHARE), and environmental training and education of young people at schools will exploit the information on global climate change.

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